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Reducing Pressure Ulcers in Emergency Department Boarding Patients

Youa Yang
ylyang@dons.usfca.edu

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University of San Francisco

Abstract

CRMC is a level one trauma and teaching hospital in Fresno, California. CRMC's emergency department (ED) is licensed for 84 beds. When hall beds are added this ED can go up to 110 beds. CRMC sees over 9,000 patients a month. Due to an increase in hospital census and length of stay, this ED has a daily average of 30 inpatients boarding. In December of 2018, this ED had one hospital acquired pressure ulcers (HAPU). Barriers to preventing HAPU's in the ED are rooms that are not big enough to accommodate hospital beds, inexperienced new nurses who are unaware of assessing and preventing pressure ulcers, and experienced ED nurses who are more focused on emergency nursing versus inpatient nursing. HAPU's increase costs in hospitals, effects quality of care, and accrues penalties. Since HAPU's are preventable it is in each hospitals interest to practice prevention. In January 2019, CRMC launched the "Save the Skin" campaign. The campaign was initiated in all units, including the ED. The campaign was an eight-week education bundle. After completion of the campaign, all CRMC nurses used the Save the Skin acronym with their skin assessments. Quarterly CRMC score cards showed an improvement of two consecutive months of zero HAPUs in the ED and a 44% decrease of HAPUs at CRMC.

Introduction

CMC is a private and not-for-profit healthcare network based in Fresno, California. CMC operates four hospitals, a cancer institute and several long-term care, outpatient and other healthcare facilities. CRMC is the flagship of CMC's four acute-care facilities, with an average daily census of 555 patients. CRMC medical center is located on a 58-acre campus in downtown Fresno. With a full-service, 56,000-square-foot emergency department, one of the largest in California. CRMC is the region's only comprehensive burn and level one trauma center.

CRMC's ED is licensed for 84 beds. When hall beds are added this ED can go up to 110 beds. CRMC employs nursing staff from newly graduated nurses to experienced trauma nurses. Barriers to preventing HAPU's in the ED are rooms that are not big enough to accommodate hospital beds, inexperienced new nurses who are unaware of assessing and preventing pressure ulcers, experienced ED nurses who are more focused at emergency nursing versus inpatient nursing. Another barrier is an increase in hospital census and length of stay causing this ED to have an average of 30 inpatients boarding. (Appendix A.). In December 2018, the ED had one HAPU. To manage these barriers, CMC educators built an educational model with evidence base practice for improved skin assessments, interventions, and documentation.

The University of California San Francisco (UCSF), (2019), defines a pressure ulcer as an injury to the skin or underlying tissue caused by pressure, friction and moisture. These ulcers often occur when patients have limited mobility and can't change positions in bed on their own. Per the Agency for Healthcare Research and Quality, (2014), more than 2.5 million people in the United States develop pressure ulcers (P.U). P.U causes pain, associated risks for infections, and increased health care utilization. According to Boyko, T. V., Longaker, M. T., & Yang, G. P. (2018), despite an increased number of therapies available on the market, none has demonstrated

any clear benefit over the others and pressure ulcer treatment remains frustrating and time-consuming. According to Padula, W.V., et al (2011), all hospitals are at risk for incurred costs for hospital acquired pressure ulcers (HAPU). The costs can range from $500 to $70,000 per a patient and $11 billion a year. Since HAPU's are preventable it is in each hospitals interest to practice prevention. According to Rondinelli, J., et al, (2018), if a HAPU reaches Stage three (full-thickness skin loss) or Stage four (full-thickness skin loss and tissue loss), it is reported to Centers for Medicare and Medicaid Services and that results in subsequent limited reimbursement. The Joint Commission, (2016), advises that preventing pressure injuries has always been a challenge, not just for caregivers, but also for the health care industry as a whole, because the epidemiology of pressure injuries varies by clinical setting, and is a potentially preventable condition. According to Ocampo, W., et al, (2017), while a number of preventive strategies have the potential to reduce the cost of hospital acquired P.U, the most effective approach is still unclear. Padula, W., (2017) advises that P.U can be prevented with a structure, process, and outcomes module. Healthcare facilities should aim at assisting hospital staff in implementing effective pressure ulcer prevention practices with an interdisciplinary team approach.

Statement of the Problem

The PICO model to support the problem of HAPUs in the ED effects the patient population of ED boarders. The problem is ED patients are at risk for pressure ulcers due to lack of inpatient care such as thorough skin assessments, bed baths, and not having a hospital bed. According to Lui, et al, (2017), pressure ulcers have been a common complication in the ED and some possible include the demographics of patients visiting the ED have changed over this timeframe. Patients older than 60 years' account for almost 24% of all ED visits worldwide.

Patients admitted in the ED usually present with a serious medical illness, multiple comorbidities, and poor functional status with limited mobility and activity. The length of time spent in an ED is crucial and has increased in the past decade. Studies from the past 10 years showed 99.2% of patients in the United States had an ED length of stay greater than 2 hours prior to hospital admission, suggesting patients in the ED are vulnerable to pressure ulcers.

The ED is a complaint focused department, but with admitted patients often boarding some of the inpatient standards of care could get missed. This could happen because of the different acuity of patients an ED nurse could have. An example would be; an ED nurse having an assignment of two admitted inpatient boarders and having two other patients with acute complaints that are still in process. The ED nurse may be more focused on the interventions for the acute patients, while the standards of care for the two ED boarders are not being met as they would have if they moved to the inpatient floors. This process of delivery can put patients at risk for HAPU.

Emergency nurses are being taught to identify a medical emergency and assist in medical stability as a priority. Because of this learned behavior ED nurses will often avoid in-patient care including a complete skin assessment. The ED nurse may lack documentation of long term skin conditions such as pressure ulcers and be more focused on documentation of acute skin conditions such as trauma or burns. Documentation of complete skin assessments often occurs when the patient arrives to their in-patient room, but instead documentation should occur when the patient arrives to the ED. Per CMC's hospital policy a full skin assessment must be done within four hours of admission. If an in-patient nurse completes a full skin assessment and notices a pressure ulcer that the ED nurse did not document, the hospital must own the pressure ulcer as hospital acquired.

According to Zaratkiewicz, et al, (2010), HAPUs are a national concern due to patient morbidity, treatment cost, and reimbursement issues. Stages III and IV pressure ulcers (PUs) that occur during hospitalization are among the conditions considered preventable by the Centers for Medicare and Medicaid Services (CMS). This is stimulated in part by new state and federal initiatives that impact mandatory reporting and reimbursement for these conditions that have in recent years been defined as avoidable or "never events." Pressure ulcers (PUs) acquired during hospitalization, evaluated as either Stages III or IV are considered among the eight preventable conditions identified by the CMS. Since October of 2008, hospitals no longer receive higher Medicare payments related to the ulcer specific care of patients who acquire Stages III or IV PUs during their inpatient stay. Private insurers are also adopting these reimbursement restrictions.

The CMC score card for the CRMC in December 2018, identified 32 HAPUs with one occurring in the ED, (Appendix B.). The highest unit based occurrence was in ICU. ICU had a total of three HAPUs. The aim of the campaign is an outcome of zero HAPUs in each unit.

Project Overview and Methodology

The "Save the Skin" project will streamline a process of skin assessments within all units at CRMC, including the ED. This project is aimed at establishing standards of care in the ED by implementing evidence-based change. The specific aim is to improve performance in the ED. By improving the process delivery in the ED, patients will have a better quality of care, decreased cost for HAPU for care and supplies, improved healthcare reimbursements from CMS, and eliminate penalties or fines from the California Department of Public Health (CDPH).

In January, 2019 CMC launched the "Save the Skin" campaign (Appendix C.). The campaign is an eight-week education bundle. Week one to focus on "S" for skin assessment within four hours

of admission and transfer and upon discharge. Week two to focus on "A" for assess risk by using the Braden scale. Week three to focus on "V" for vigilant monitoring. Week four to focus in "E" for early mobility. Week five to focus on "S" for surface selection. Week six to focus on" K" for keep turning. Week seven to focus on "I" for incontinence management. Week eight to focus on "N" for nutrition and hydration. After the eight-week education bundle is completed, nursing staff will use the acronym "Save the Skin" during all skin assessments.

The SWOT analysis for this campaign includes; strengths of this campaign are improving quality of care and cost reduction, decreasing patients' length of stay (LOS), nursing education will be FTE neutral. CRMC ED employs 486 employees with 284 registered nurses (RNs). Because of the amount of employees in this department, two corporate nurse educators are assigned to work specifically with the ED. This allows decrease in FTE's for training and education. Weaknesses of this campaign include a ED admits who often board in the ED for 24-48hrs, increased ED boarders due to high hospital census, different acuity of care for nursing assignments, and an increased workload. Opportunities for this campaign include changing a culture of emergency nursing to include inpatient care. Internal threats of this campaign include increased interventions and documentation for an already heavy workload for ED nurses, pushback and resistance from nursing staff, and an increase in staffing turnover. External threats include an increased risk for fines and penalties for HAPU in the ED. (Appendix D.)

A cultural assessment was completed by surveying ED RNs on their perception of the importance on identifying and treating pressure ulcers. The results of the survey were 32% percent of the ED RNs did not feel identifying and treating PUs was a priority in the emergency setting. According to the Institute for Healthcare Improvement (IHI), (n.d), bedsore was the common name centuries ago. The nursing culture then, was to treat and heal bedsores. The

change culture should aim to educate nurses to prevent HAPU's before they occur in all units, including the ED. To improve care, nurses can eliminate the old culture of "treating" HAPU's to adapting a new culture of "preventing" HAPU's. HAPU's are now seen as a preventable source of unnecessary harm. If nurses are being taught they can harm a patient by not "Saving the Skin" a cultural change in nursing care can be initiated in the microsystem. The CNL must initiate an ethical aim that all patients are to have a full skin assessment, have any risks for skin breakdown identified, have assistance in mobility if the patient is unable to do so for them self, and be free from pain.

The Lippitt's theory was applied to the Save the Skin campaign. In phase one, the identified problem was the ED accruing one HAPU in December 2018. In Phase two and three a survey was given to the ED nurses to obtain their perception of importance of HAPUs in the ED. The survey helped as an indicator for motivation for change and the change agents. In Phase four the change objective was to educate the ED nurses with evidence based changed. Four shift reports were given to the four ED teams. The education given at shift report were in power point form and indicated the rational for a change in skin assessments by introducing the "Save the Skin" campaign. The power points contained previous score cards for the ED compare to the ICU and quality indicators that effects cost related penalties and fines by CMS. In phase five the appropriate role of campaign champions was identified to assist in launching the Save the Skin campaign. In phase six maintaining change was implemented by being consistent with the campaign. Shifts reports to all four teams were given weekly with each weekly launch of the campaign bundle. An initial Health Stream (HLC) online learning of the campaign was assigned to all nurses to complete. The HLC had a mandatory post-test and the nurses had to pass with an 80% or higher. In phase seven the ED managers and educators reviewed the ED score cards on a

monthly basis to evaluate for improvement. The educators and champions did daily chart audits to evaluate skin documentation.

After the Save the Skin education was completed, all CMC nurses used the Save the Skin acronym with their skin assessments. The quality measure will be monitoring the outcome of total HAPUs reported in each unit. Quarterly CMC score cards will be reviewed to see if HAPU's have decreased in all units. Any unit that does not show improvement will be assessed to determine if another education module can be identified for process improvement. According to the Agency for Healthcare Research and Quality, (2019), the goal of the microsystem approach is to focus on small, replicable, functional service systems that can enable staff to provide efficient patient center care. The health care organization should develop and refine systems to focus on the smallest measurable cluster of activities. Once the micros system is identified, a practice of plan can select the best teams to test and implement new ideas at the microsystem site.

Results

The December 2018 facility scored card showed a total of 32 HAPUs with one in the ED The Save the Skin campaign was launched in January, 2019. The eight-week training concluded on the first week of March. After the eight-week training, the facility score card showed a 44% decrease of HAPUs. In June 2019, three months after the training, the facility score card remains at a 44% decrease with 18 HAPUs, with one in the ED (Appendix E.). Even though the ED remains with one HAPU in June 2019 as it did in December 2018, the 2019 score card showed zero HAPUs for two consecutive months of April and May, (Appendix B.). The aim to decrease HAPUs in the macro-system has been met but the aim to decrease HAPUs in the ED was not met.

Conclusion

The Save the Skin campaign was effective in the macro-system as a whole facility, but did not show an increase or decrease in the micro-system of the ED. Two months after the campaign was launched the ED showed 100% improvement, but the third month the ED had one HAPU converting back to December of 2018's results. The outliers include the ED nurse could have missed the full skin assessment or documentation due to the patient workload, increase census due to the flu season, and increased ED boarders due to isolation clearance needed on the inpatient side. Resistance to change by our veteran ED nurses was the biggest challenge. We had 90% buy in, the remaining 10% were resistant to the "Save the Skin" campaign. To determine these numbers, we did a post education survey after launching our Save the Skin campaign. Out of 284 nurses, 84 nurses answered they did not have time for the skin assessments, skin assessments are last priority, and skin assessments are not a part of emergency nursing. These 84 nurses answered they worked in the critical and trauma areas of the ED and their years of service were five or more years. This can be the reason why HAPUs in the ED went from zero for two consecutive months after the training, but reverted back to one HAPU after three months. Overall there was a 100% decrease for two consecutive months after the training. The ED will keep the Save the Skin change model and continue education and monitoring of skin assessments. The revised model for improvement will include staff buy in from the veteran nurses. The ED management will identify and include some of the veteran nurses to be champions in an EPIC build for simpler documentation of skin assessments.

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Reid,. K., Dennison, P., (2011). The clinical nurse leader (CNL): Point-of-care safety clinician. *The Online Journal of Issues in Nursing*, 16, (3). Retrieved from http://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-16-2011/No3-Sept-2011/Clinical-Nurse-Leader-and-Safety.html

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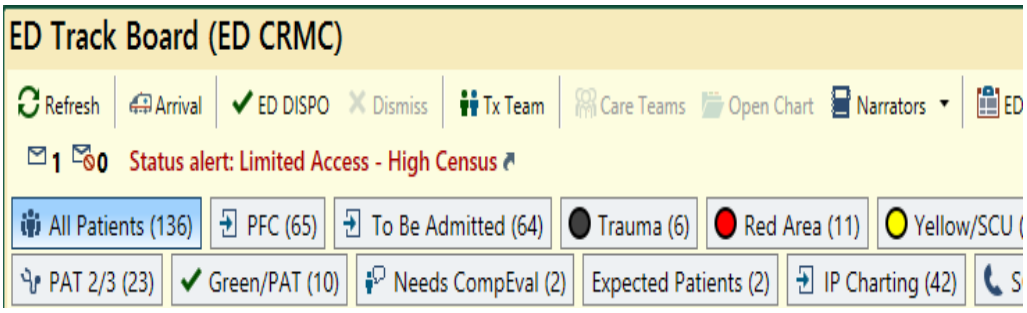
Appendix A.

11/27/19 ED Census: 137 with 65 ED Boarders



Appendix B.

CMC Quarterly Practice and Compliance Score Card: June 2019:

			Quarter 1 - FY2019			Quarter 2 - FY2019			Quarter 3 - FY2019			Quarter 4 - FY2019			FYTD	FYTD Target	Facility Target	Min. Avg to Achieve Target
Measure		System Baseline	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019				
Hospital-Acquired Pressure Injury	Monthly Case Count	245	17	24	28	31	19	11	18	25	15	18			206	204	245	19.5

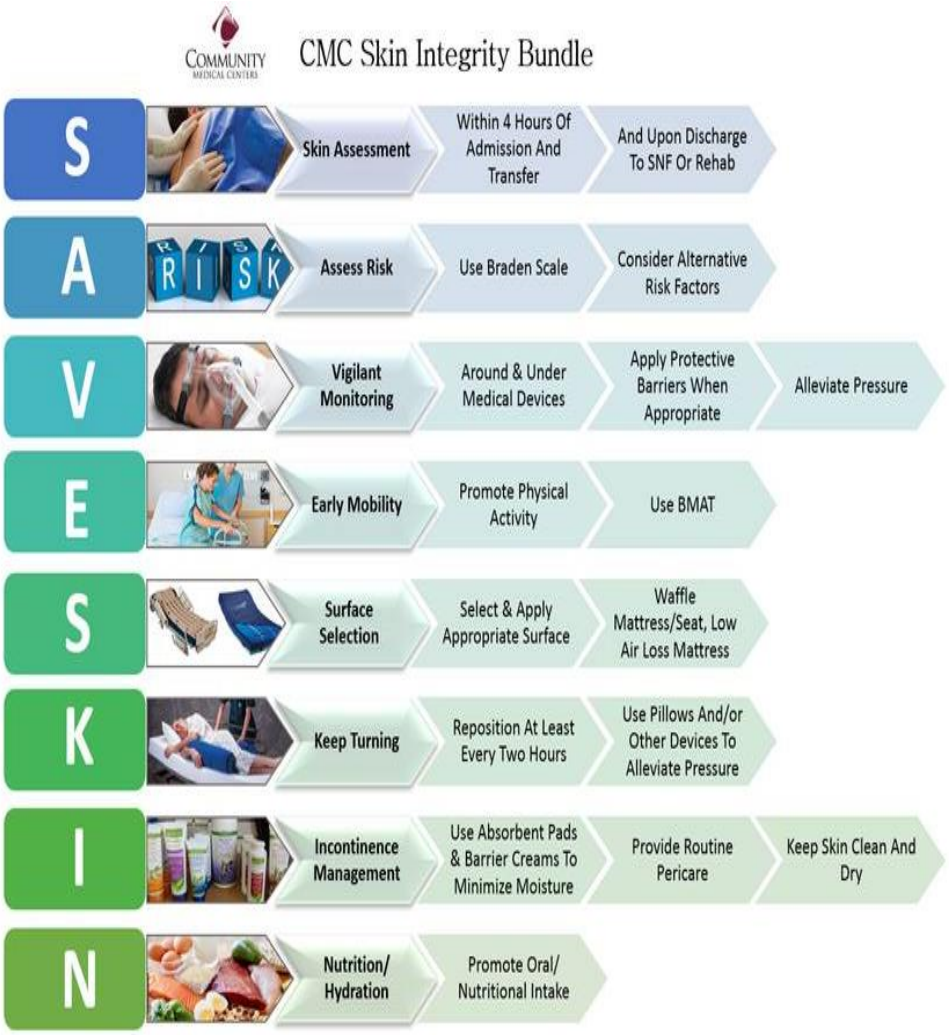
CRMC Unit Based Score Card Analysis: June 2019:

COMMUNITY REGIONAL MEDICAL CENTER: ED

			Quarter 1 - FY2019			Quarter 2 - FY2019			Quarter 3 - FY2019			Quarter 4 - FY2019			FYTD
Measure		Facility Baseline	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	
Hospital-Acquired Pressure Injury	Monthly Case Count	141	1	1	1	1	2	1	2	0	0	1			10

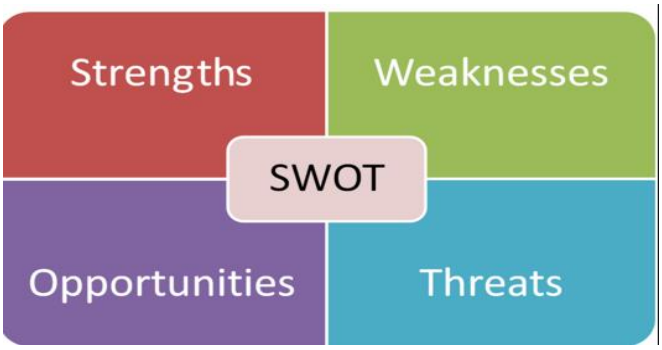
Appendix C.

Save the Skin Campaign:



Appendix D.

SWOT Analysis:

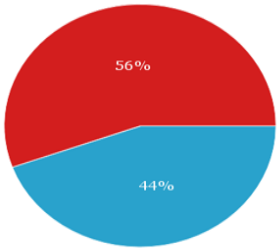


Strengths	Weaknesses	Opportunities	Threats
Improve quality of care and cost reduction. Decrease patient LOS. Nursing education will be FTE neutral.	Increased ED boarders due to high hospital census. Different acuity of care for ED patients and an increase workload.	Changing a culture of emergency nursing to include inpatient care.	Internal: Increased interventions and documentation for an already heavy workload for ED nurses. External: Fines and penalties

Appendix E.

Three month results after the Save the Skin training

Macro-system decreased by: 44%



Micro-system improvement: none

Annotated Bibliography

Agency for Healthcare Research and Quality, (2014). Preventing pressure ulcers in hospitals. Retrieved from https://www.ahrq.gov/professionals/systems/hospital/pressureulcertoolkit/index.html

This article reports that more than 2.5 million people in the United States develop pressure ulcers (P.U). P.U causes pain, associated risks for infections, and increased health care utilization. Pain decreases patient satisfaction and increases costs in hospitals.

Agency for Healthcare Research and Quality, (2019). Ways to approach the quality improvement process. Retrieved from https://www.ahrq.gov/cahps/quality-improvement/improvement-guide/4-approach-qi-process/index.html

This article describes the goal of the microsystem approach by focusing on small, replicable, functional service systems that can enable staff to provide efficient patient center care. The health care organization should develop and refine systems to focus on the smallest measurable cluster of activities. Once the micros system is identified, a practice of plan can select the best teams to test and implement new ideas at the microsystem site.

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This article reports that despite an increased number of therapies available on the market, none has demonstrated any clear benefit over the others and pressure ulcer treatment

remains frustrating and time-consuming. By preventing pressure ulcers costly therapies can be avoided.

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This article advises that preventing pressure injuries has always been a challenge, not just for caregivers, but also for the health care industry as a whole. The epidemiology of pressure injuries varies by clinical setting, and is potentially a preventable condition.

Ocampo, W., Cheung, A., Baylis, B., Clayden, N., Conly, J., Ghali, W., Ho, C., Kaufman, J., Stelfox, H., & Hogan, D., 2017. Economic evaluations of strategies to prevent hospital-acquired pressure injuries. ***Advances in Skin & Wound Care*****, 30 (7), pp 319-333. Retrieved from** https://journals.lww.com/aswcjournal/fulltext/2017/07000/Economic_Evaluations_of_Strategies_to_Prevent.8.aspx

This article researches that hospital-acquired pressure injuries (HAPIs) are globally common, often preventable, costly, and associated with significant morbidity and mortality. There are numerous preventive strategies that have the potential to reduce the cost of hospital acquired P.U, but the most effective approach is still unclear.

Padula, W., 2017. Let's start at the top, getting administrative buy in. National Pressure Ulcer Advisory Panel. Retrieved from https://www.npuap.org/wp-content/uploads/2017/03/Padula-William-NPUAP-13FEB17.pdf

This article advises that P.U can be prevented with a structure, process, and outcomes module. The aim is to assist hospital staff in implementing effective pressure ulcer prevention practices with an interdisciplinary team approach.

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This article describes CNLs are to receive advanced education about risk anticipation, risk reduction, safety, and quality. CNLs are also prepared to address change by the use of failure modes analysis techniques (anticipating potential negative effects of change prior to instituting change), as well as to conduct root cause analyses for care delivery near misses and errors. Within the nursing paradigm, the CNL's 'patient' becomes the point of care. In short, the clinical nurse leader applies the nursing process to the point of care through the use of systematic, microsystem assessment techniques.

Rondinelli, J., Zuniga, S., Kipnis, P., Kawar, L. N., Liu, V., & Escobar, G. J. (2018).

Hospital-acquired pressure injury: risk-adjusted comparisons in an integrated healthcare delivery system. *Nursing Research*, *67*(1), pp 16-25. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6013055/

This research reports stages for reporting of HAPUs. If a HAPU reaches Stage three (full-thickness skin loss) or Stage four (full-thickness skin loss and tissue loss), it is reported to Centers for Medicare and Medicaid Services and that results in subsequent limited reimbursement.

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This article sets a definition for a pressure ulcer. A pressure ulcer is an injury to the skin or underlying tissue caused by pressure, friction and moisture. These ulcers often occur when patients have limited mobility and can't change positions in bed on their own.